# COMMONWEALTH OF KENTUCKY RECEIVED BEFORE THE PUBLIC SERVICE COMMISSION 29 2005

In the Matter of:

	CACHAICH
APPLICATION OF EAST KENTUCKY POWER	)
COOPERATIVE, INC. FOR A CERTIFICATE OF	)
PUBLIC CONVENIENCE AND NECESSITY	) Case No. 2005-00053
AND A SITE COMPATIBILITY CERTIFICATE, FOR	)
THE CONSTRUCTION OF A 278 MW (NOMINAL)	)
CIRCULATING FLUIDIZED BED COAL FIRED UNIT	)
AND FIVE 90 MW (NOMINAL) COMBUSTION	)
TURBINES IN CLARK COUNTY, KENTUCKY	)

## PETITION TO INTERVENE OF SIEMENS-WESTINGHOUSE POWER CORPORATION

Pursuant to KRS 228.310 and 807 KAR 5:001 Section 3(8), Siemens-Westinghouse Power Corporation (hereinafter "Siemens-Westinghouse") requests that it be granted full intervenor status in the above-captioned Application and states in support thereof as follows:

- 1. The Petitioner, Siemens-Westinghouse, has its offices located at 4400 Alataya Trail, Orlando, FL 32826-2399. The Petitioner's attorney for the purpose of receiving service of all documents in this proceeding is Brent L. Caldwell, Esq., McBrayer, McGinnis, Leslie & Kirkland, PLLC, 201 East Main Street, Suite 1000, Lexington, Kentucky 40507.
- 2. Siemens-Westinghouse has been a leader in providing electrical generating technology worldwide for many years. Siemens-Westinghouse responded to the RFP issued by East Kentucky Power Cooperative ("EKPC") in this matter.
- 3. Siemens-Westinghouse has reviewed the information available in the public record in this matter, including but not limited to the response filed by EKPC to Request for Information No. 7 issued on March 18, 2005 by the Public Service

Commission staff. Siemens-Westinghouse believes that certain information placed in the record by EKPC concerning the products and capabilities of Siemens-Westinghouse is significantly inaccurate and misleading, as set forth in the Affidavit of Gregory J. Snyder, attached hereto as Exhibit A.

- 4. Siemens-Westinghouse has not been privy to the confidential bid materials of EKPC; however, if the alleged "facts" contained in EKPC's Response No. 7 are a guide, the PSC has been provided unreliable information upon which to base its decisions, to the detriment of the public interest.
- 5. By virtue of its experience and expertise in the subject matter of this proceeding, and particularly by virtue of its knowledge concerning the specifications, capabilities and operational characteristics of the V84.3A gas turbine generator, Siemens-Westinghouse is in a position to assist the Public Service Commission to protect the public interest by rendering a decision in this matter based upon accurate facts. Siemens-Westinghouse has business, technical and professional expertise and experience with respect to the subject matter of this Application that are not and will not be adequately represented by other parties to this proceeding.
- 6. Through its participation in this proceeding, and to protect the public interest, Siemens-Westinghouse seeks full intervention to provide testimony to the Kentucky Public Service Commission and brief issues on the impact that this Application may have upon the citizens of the Commonwealth of Kentucky. Siemens-Westinghouse may identify additional issues it wishes to pursue before the Kentucky Public Service Commission.

7. Siemens-Westinghouse states that its participation in this case will assist the Commission in reaching its decision and will not unduly interrupt the proceedings or prejudice any party.

WHEREFORE, Siemens-Westinghouse respectfully requests the Commission to grant its Petition to Intervene and to allow it to participate with full intervenor status in this proceeding.

Dated this day of April, 2005.

Respectfully submitted,

MCBRAYER, MCGINNIS, LESLIE & KIRKLAND, PLLC 201 E. Main Street, Suite 1000 Lexington, KY 40507 (859) 231-8780

BRENT L. CALDWELL ATTORNEY FOR PETITIONER, SIEMENS-WESTINGHOUSE POWER CORPORATION

#### **CERTIFICATE OF SERVICE**

It is hereby certified that an original and ten (10) copies of the Petition to Intervene on behalf of Siemens-Westinghouse, in the aforementioned case were handdelivered upon the following:

Kentucky Public Service Commission 211 Sower Boulevard Frankfort, KY 40601

and that one (1) copy of the Petition was served via U.S. mail, postage pre-paid, upon the following:

Charles Lile
East Kentucky Power Cooperative, Inc.
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

Roy M. Palk East Kentucky Power Cooperative, Inc. 4775 Lexington Road P.O. Box 707 Winchester, KY 40392-0707

Elizabeth E. Blackford, Esq. Assistant Attorney General Office of Rate Intervention 1024 Capital Center Drive Frankfort, KY 40601

Michael L. Kurtz Boehm, Kurtz & Lowry 36 East 7<sup>th</sup> Street, Suite 1510 Cincinnati, OH 45202

Frederic J. Cowan Lynch, Cox, Gilman & Mahan, PSC 400 West Market Street, Suite 2200 Louisville, KY 40202

Stephen M. Soble O'Connor & Hannan, LLP 1666 K Street N.W., Suite 500 Washington, D.C. 20008-2803

Richard G. Raff Public Service Commission of Kentucky 211 Sower Boulevard Frankfort, KY 40601

this 29 day of April, 2005.

BRENT L. CALDWELL

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### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

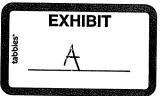
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#### AFFIDAVIT OF GREGORY J. SNYDER

Comes the Affiant, Gregory J. Snyder, and after first being duly sworn, states as follows:

- 1. I am over the age of 18 years and am competent to testify in this matter. I am employed as a Vice President for Siemens-Westinghouse Power Corporation (hereinafter "Siemens-Westinghouse") and have been employed with Westinghouse (now Siemens-Westinghouse) since 1977.
- 2. I have worked in a project development/ financing and sales management role for the Siemens-Westinghouse family of turbine generators (including the V84 frames), and associated systems, for 13 years. As such, I am familiar with key aspects of its specifications, capabilities and operational characteristics. Additionally, based upon my training and experience, I am familiar with numerous other power generating systems and technologies, including the newly introduced GE LMS 100 unit.
- 3. I have reviewed certain documents pertaining to the above described application, including but not limited to the response of East Kentucky Power Cooperative, Inc. ("EKPC") to Request for Information No. 7 issued by the Public Service Commission staff. Based on my review of the documentation, it is evident that Siemens-Westinghouse offered the lowest cost proposal offering the Siemens-Westinghouse V84.3A Econopac gas turbine generator units.
- 4. The Siemens-Westinghouse V84.3A Econopac gas turbine generator has been in service since 1997. Approximately 70 units have been sold since 1997. The fleet of V84.3A machines have clocked the combined



equivalent of over 450,000 operating hours (in contrast with the GE LMS 100, which is a prototype and to our knowledge has never been used in a similar application). There is substantial data available to demonstrate the reliability and maintenance history of the V84.3A. Over its history, it has experienced a forced outage rate of <2% fleetwide.

- 5. In its Response No. 7, EKPC identified five major concerns regarding what it called "significant reliability and maintenance issues" with the V84.3A Econopac. Based upon my personal knowledge, and upon actual field operating data generated since 1997, the concerns expressed by EKPC are inaccurate.
- 6. The five concerns expressed by EKPC, together with the correct facts that should be considered by EKPC and the PSC, are as follows:
  - 1. The use of approximately 350 ceramic tiles in the combustion chamber that are prone to cracking and must be carefully inspected and/or replaced fairly often to prevent a liberated tile incident.

Response: The tile design offered by Siemens-Westinghouse is currently operating in 31 units and has a good operating history. The standard inspection interval for V84.3A's with ceramic heat shields is 4000 EOH, which for a gas fired unit would mean one 3-4 day on site inspection after one year of operation with an assumed operating scenario of 180 starts per year and 12 hours of operation per start. The warranties offered by Siemens-Westinghouse guarantee the performance of the entire turbine system and a long term service contract is also available to ensure maximum reliability and availability over the life of the unit.

2. Generator problems involving failure of cooling blades.

<u>Response</u>: The offered generator blades do not have a history of operating or reliability issues.

3. Humming/vibration problems that could cause tile liberation and capacity derates.

Response: The offered turbine has not had a history of humming or vibration issues. A humming/vibration issue that did occur in an earlier version of the V84.3A has been resolved through enhancements in the combustor design. In

addition, enhancements to ceramic heat shields have been incorporated as well as active combustion dynamic monitoring which maintains engine operation away from harmful conditions.

4. A highly proprietary control system that typically requires engineers from Germany to modify.

Response: The control system is operating on 41 machines in the U.S., has local service support, and is supported by our controls division located in Alpharetta, Georgia, just outside Atlanta. A unit is not commissioned until its operators have been properly trained by Siemens-Westinghouse. Once a unit is commissioned and turned over to the customer it does not typically need modification. There is a sizeable fleet of V84.3A units in operation and a pool of parts for both the turbine and controls along with a large staff of experienced service personnel which would not be available with the competition's prototype technology.

5. The likelihood that the units would need SCRs to meet BACT requirements, even though exhaust temperatures are too high for use with SCRs.

Response: The V84.3A turbine can meet the specified NOx requirements without an SCR. Siemens-Westinghouse's emissions guarantees are indicative of our machine's capabilities. The GE LMS 100, cannot meet the NOx levels of the V84.3A and will require the addition of an SCR to meet the specified emission rate. An SCR would require significantly higher operations and maintenance costs and higher risks due to the chemicals involved.

7. There are many additional points of interest in EKPC's Response No. 7. For example, EKPC's response points out a claimed "approximately 41%" efficiency for the LMS 100. The V84.3A has a field-proven thermal efficiency of approximately 38%, excellent for a heavy duty gas turbine, and much better than the 34% cited in the response for the GE 7EA. With the similar efficiencies of the two turbines, it is unlikely that the significantly higher capital costs could be justified at any projected gas price or operating scenario consistent with the specified or described EKPC operating duty.

8. The operating cost, reliability, and maintenance cost of the LMS 100 is unknown because it has never been used in this type of application.

Further Affiant Sayeth Naught.

	GREGORY-J. SNYDER
STATE OF Florida	_ )
STATE OF <u>Florida</u> COUNTY OF <u>Orange</u>	_ )
Subscribed, sworn to and Vice President on this the 27 day of April	acknowledged before me by Gregory J. Snyder, as of Siemens-Westinghouse Power Corporation, 2005.
My commission expires:	4/11/09
	HOTARY PUBLIC!